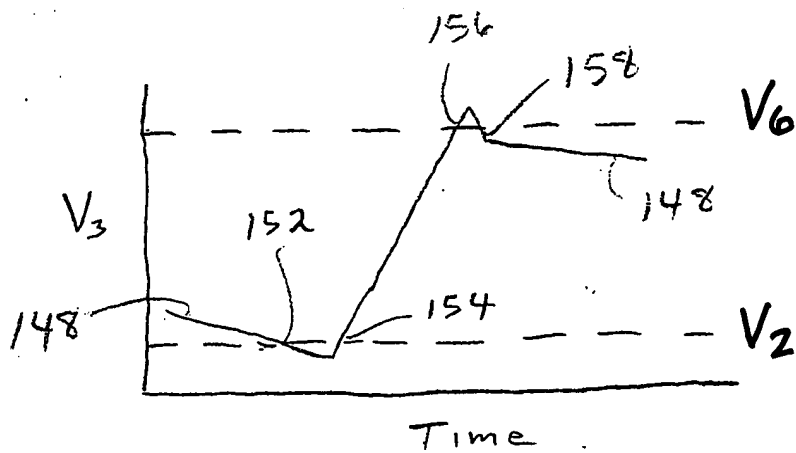
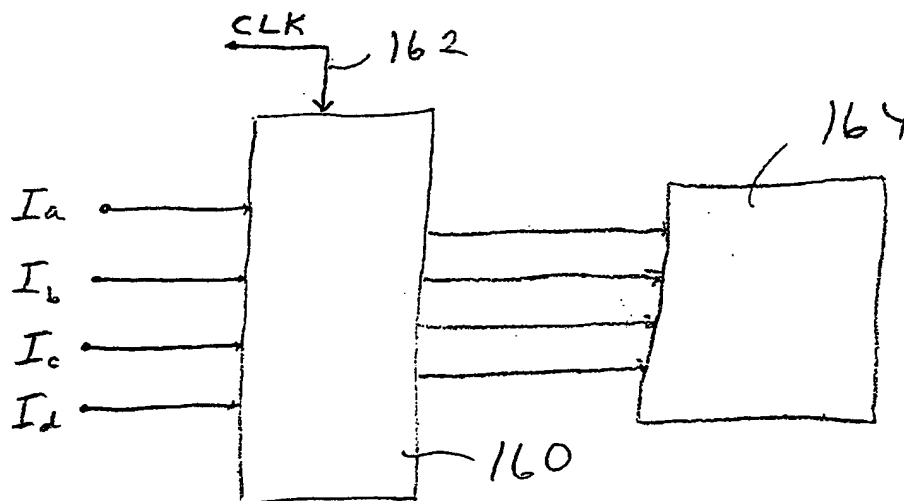


**FIG. 5**



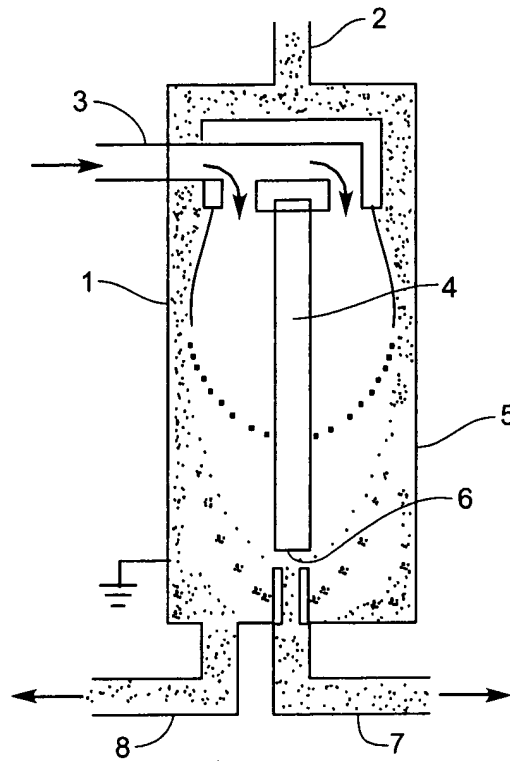
**FIG. 6**



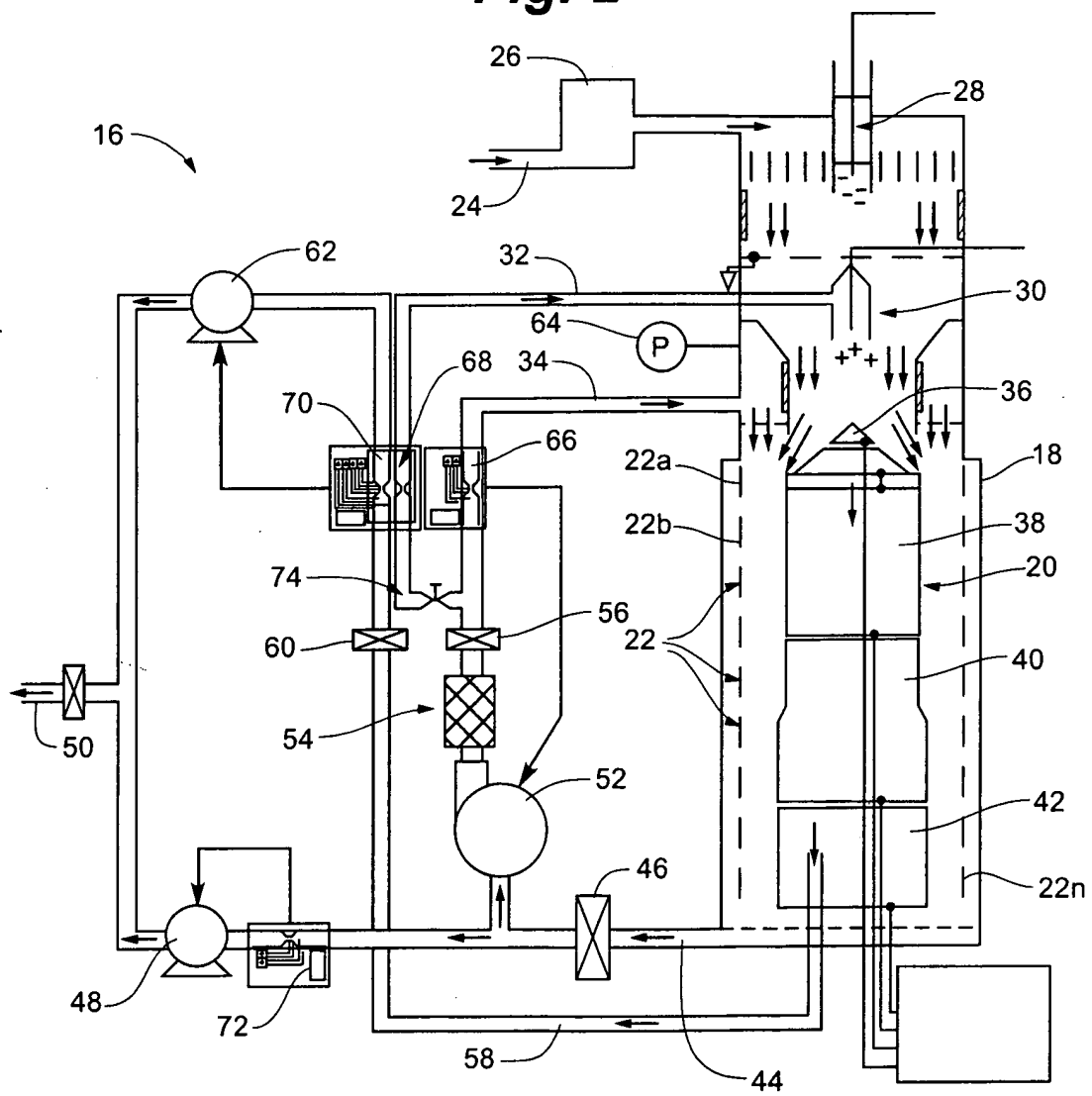
**FIG. 7**



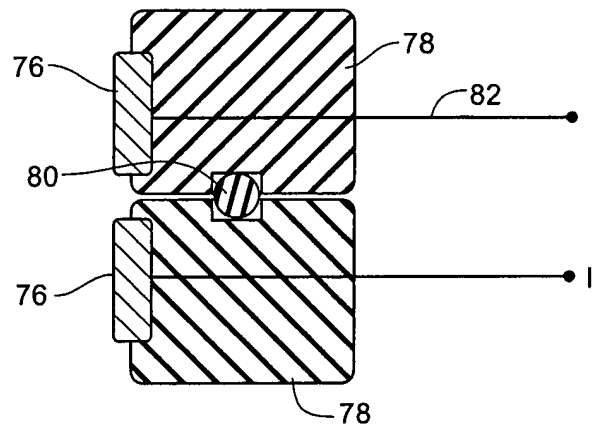
**Fig. 1**  
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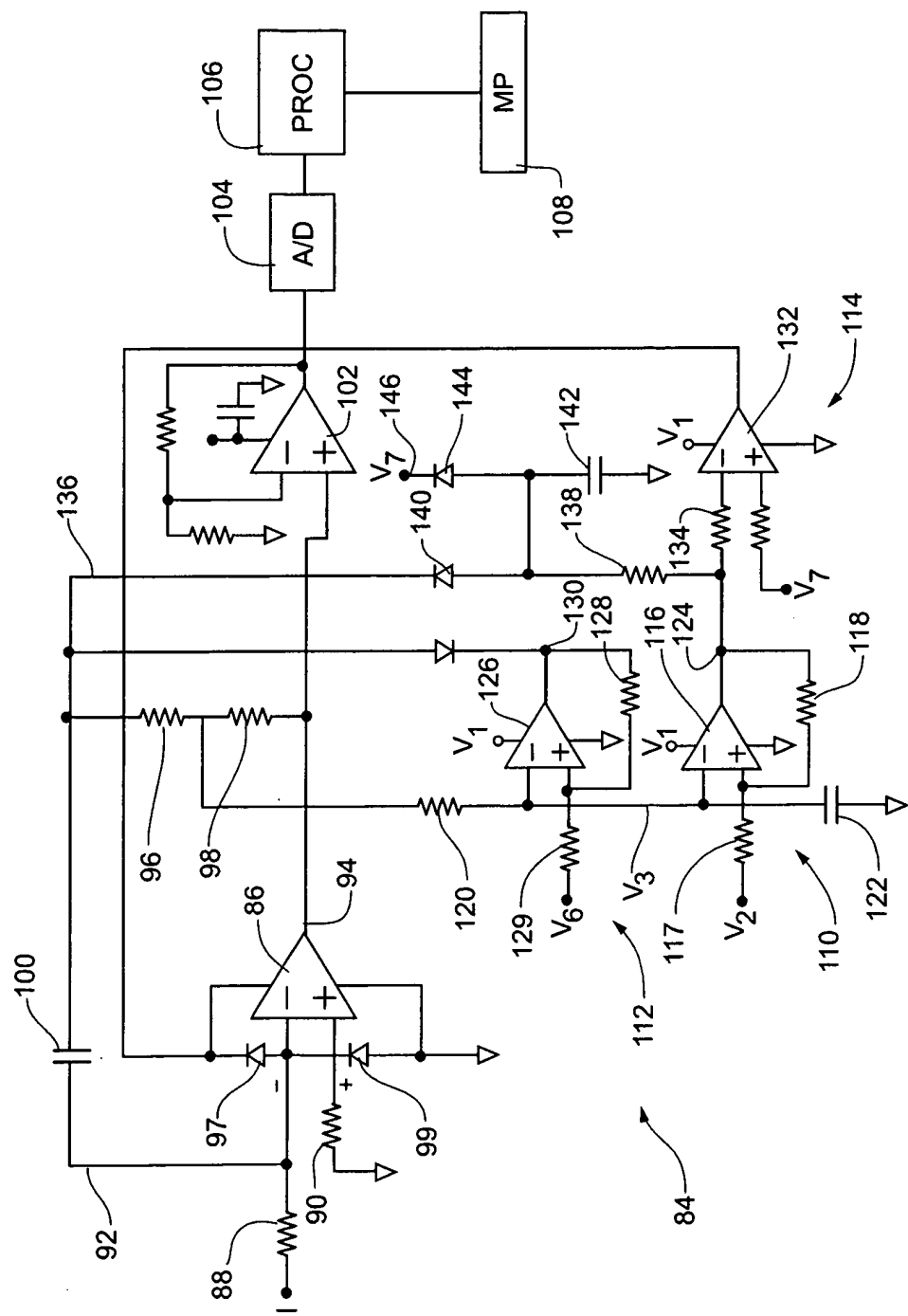


The diagram illustrates a closed-loop fluid circulation system, labeled 16, designed for a multi-stage distillation column 18. The system includes a central column 18 with multiple stages, including a reboiler 20 at the bottom and a condenser 24 at the top. A feed stream 26 enters the column through a feed tray 28. The system is equipped with a complex network of pipes, pumps, and control valves. A main circulation loop is driven by pump 62, which draws fluid from the bottom of the column (via line 58) and pumps it back to the top (via line 32). A secondary loop, involving pump 48 and line 44, circulates fluid from the bottom of the column through a heat exchanger 52 and back to the column. Various control valves (60, 64, 66, 70, 72, 74) and a pressure sensor (P) are integrated into the system to regulate flow and pressure. The column itself is divided into sections 22a, 22b, and 22n, with internal trays 30, 34, 36, 38, and 40. A reboiler 20 is located at the bottom, and a condenser 24 is at the top. A feed stream 26 enters the column through a feed tray 28. The system is designed to maintain a specific fluid level and flow rate within the column stages.

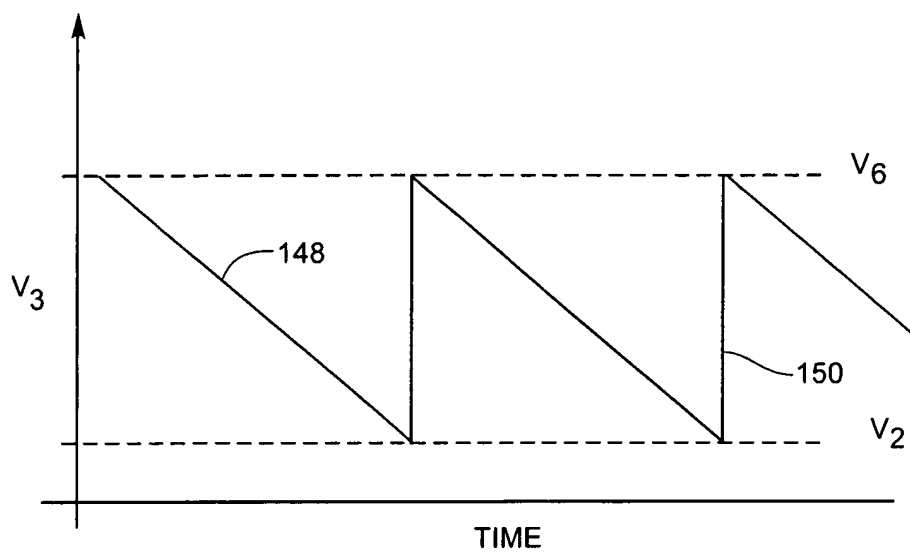


**Fig. 3**

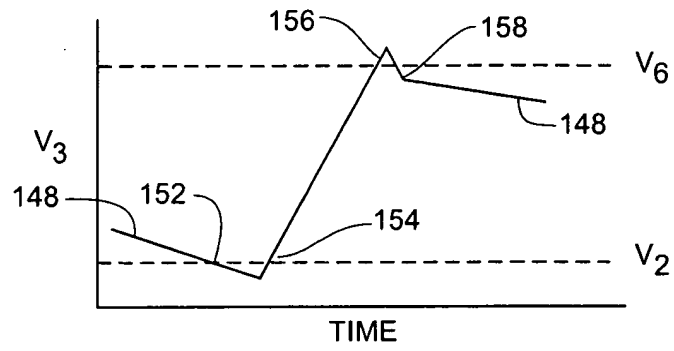




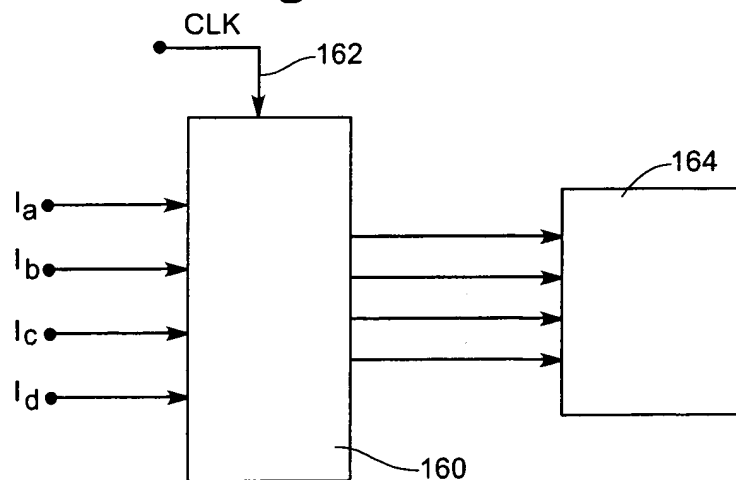
**Fig. 5**



**Fig. 6**

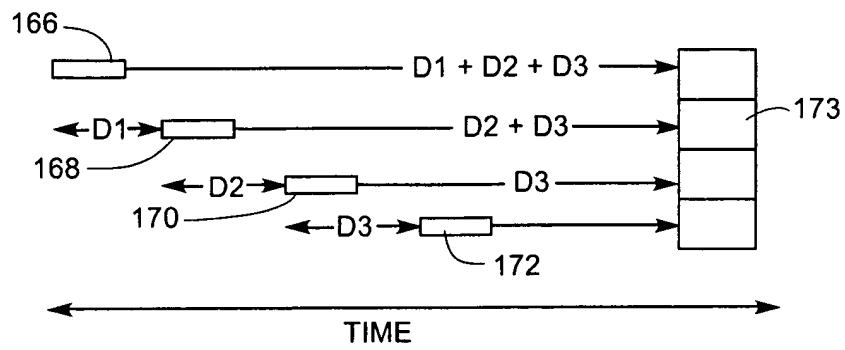


**Fig. 7**

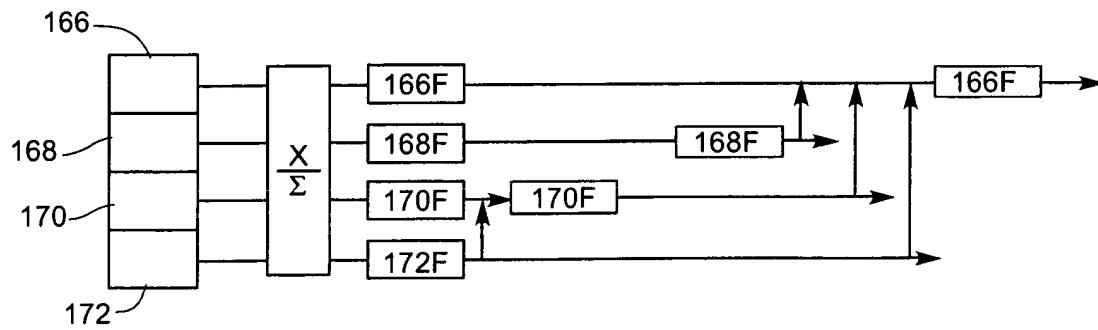




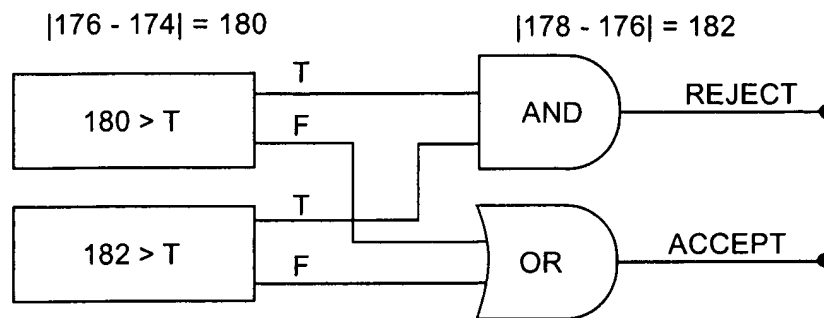
**Fig. 8**



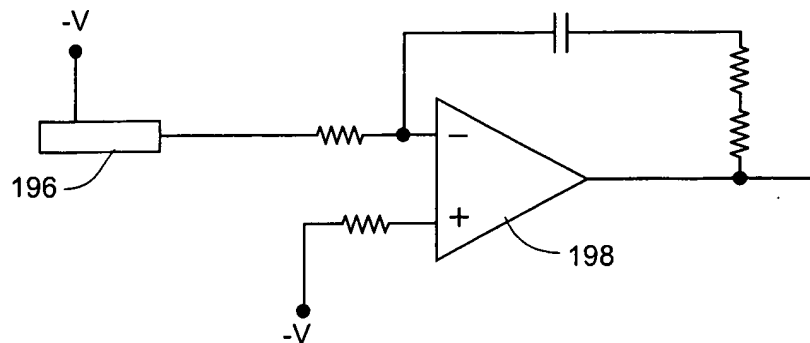
**Fig. 9**



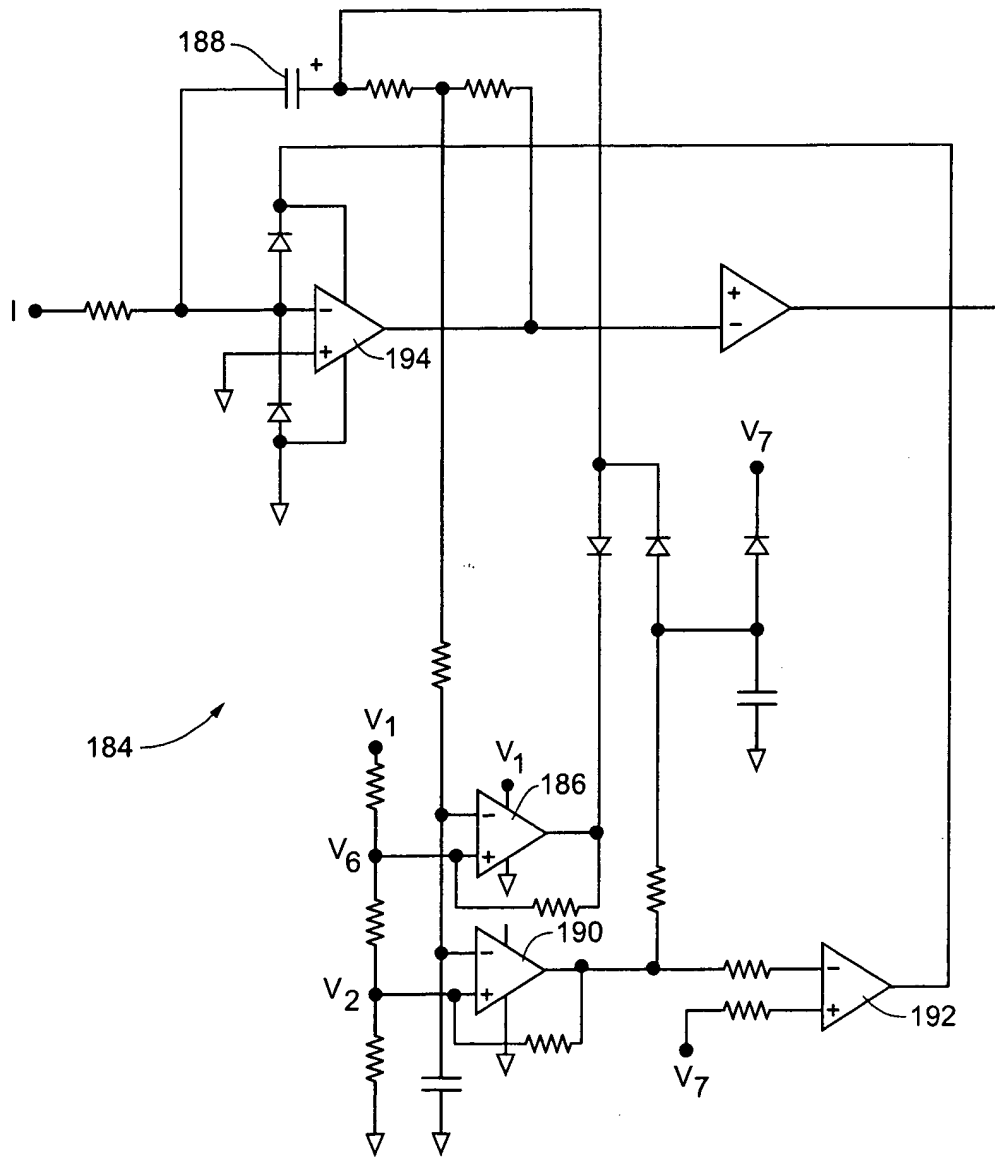
**Fig. 10**



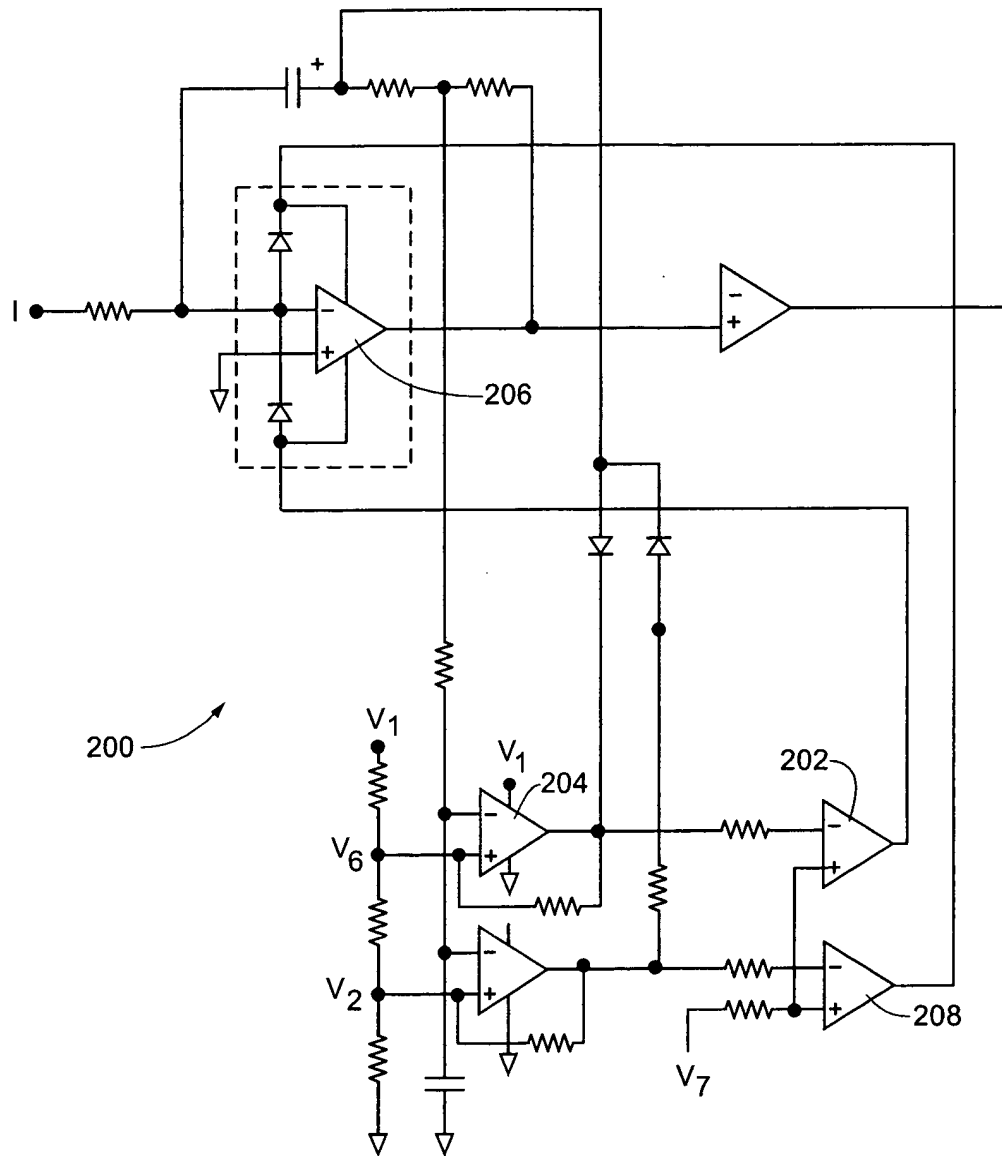
**Fig. 12**



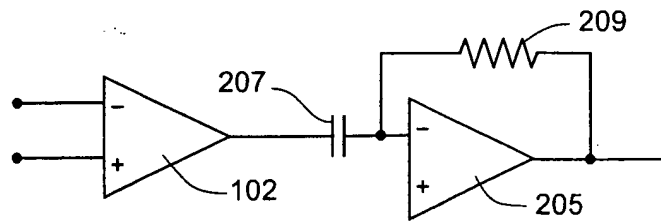
**Fig. 11**



**Fig. 13**



**Fig. 14**



**Fig. 15**

